

Project 2 - Pilot Study of Screening Bioassays on Dioxin-contaminated Soil and Sediments

One of the major areas of cooperation identified at the Singapore Meeting was to develop a capacity to identify areas with lingering high levels of dioxins in Vietnam. These "hot spots" are potentially associated with bases occupied by US forces and with areas defoliated by US forces during the Vietnam War. During the Singapore meeting, both delegations expressed the need for an environmental survey to further identify areas of possible remediation and to identify potential populations for health studies. The overall goal of this research collaboration should be to advance science for the purpose of reducing human exposure and improving public health. This overall strategy was further discussed in Hanoi.

A strategy was discussed to develop a pilot project to build the capacity in Vietnam for environmental sampling using screening approaches that show promise to be more economical, rapid, and an improvement over traditional GC/MS approaches. The purposes of this pilot project include scientific capacity building, the ability to identify areas of high dioxin contamination, the application to determination of suitable technologies for cleaning up contaminated sites, and to the future evaluation of novel approaches to remediation. As a result of our meeting in Hanoi in July, we propose:

- Further research on the validation of approximately six assay methods using immunoassay-based and Ah reporter-based methodologies. This work is currently underway in the U.S.;
- Training of Vietnamese scientists in these assays in U.S. laboratories to gain hands on experience;
- Organization of a joint working group to meet in Vietnam as early as possible. Topics to be discussed include:
 - Criteria for the selection of the study site(s) will be decided through mutual agreement
 - Past experience will be used to select sites that meet the criteria
 - Procedures needed for quality control, quality assurance, and performance evaluation for sample collection and assay use will be determined
 - Other topics as needed;
- Collection of soil samples from study site(s) and use of assays by Vietnamese and U.S. scientists. If possible this should be accomplished in 6-12 months;
- Development of a research project addressing remediation on a pilot scale;
- Organization of a workshop to share data and discuss results with the purpose of selecting assays for application to future environmental screening, site characterization and evaluation of remediation techniques. This workshop should be held as soon as feasible.

It was recognized by the collaborating countries that this research effort will require laboratory capacity building and training. There was mutual agreement to pursue these needs in the context of this project. The results of this pilot project could be applied in practice to a few selected sites and could be the basis for further projects, such as studies of human health effects and remediation projects.

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